

A B S T R A C T

PROCESS FOR REMOVAL OF CARBON DIOXIDE FROM FLUE GASES

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A process to removal and capture of carbon dioxide from flue gas is provided. Carbon dioxide is extracted from flue gas by contacting the flue gas with a solvent in a solvent extraction zone (1) to obtain a carbon dioxide-depleted flue gas, regenerating the solvent in a solvent regeneration zone (2) by heating the carbon dioxide-containing solvent to obtain a regenerated solvent and a carbon dioxide stream and reacting the carbon dioxide stream obtained in step (b) with a bivalent alkaline earth metal silicate in a mineral carbonation zone (3) by contacting the carbon dioxide stream with silicate particles dispersed in an aqueous solution.

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